

SCIENTIFIC INTELLIGENCE.

The Annual Meeting of the British Association for the advancement of Science was held this year at Swansea, August 9—16.

At the General Meeting, on the first day, the Report of the Council for the last year was presented. The Marquis of Northampton, on taking the chair, delivered an eloquent address, in the course of which he adverted to various events connected with the history of science during the year, eulogized the labours of Sir John Herschel, and expressed his regret that the political state of Europe at the present time affected injuriously the interests of science.

"The summary of proceedings at the meeting is as follows:—On Wednesday, August 9, the General Committee assembled. On Thursday, business began in all the Sections—the Ethnological Sub-section forming the only exception: and in the evening Dr. Percy delivered a Lecture in the Baptist Chapel, 'On the Chemistry of the various Metallurgic Processes now practised around Swansea.' Of course, that of copper smelting formed the main subject. In the first place, the varieties of ores employed—viz., the oxide of copper, the sulphuret and the double sulphuret of copper and iron, and the recently imported carbonates, were described. The processes of roasting to expel the arsenic and to a certain extent the sulphur, and the arrangements of the furnaces were minutely detailed. A great number of specimens, showing every stage of the process, were exhibited. The smelting process formed the next subject of consideration; which was well described and amply illustrated. The various qualities of copper produced from different ores, and the causes of the differences, as far as they are known, were examined. In addition to the ordinary processes of reduction, the recent process patented by Mr. Napier, in which the ore is reduced by taking advantage of the chemical affinity of iron for the sulphur of the ores was described. It was thought to possess many advantages, and the copper produced by the process was of an exceedingly good character. A short notice was taken of the works at Ystalyfera, where anthracite is employed for fusing iron,—and the heated gases escaping at the top of the furnace are collected and employed to heat the boiler of a steam engine; by this, saving the entire amount of the ordinary fuel. In

conclusion, the necessity of uniting practical knowledge and experimental science was insisted on—and the great importance of some school in which, as at the Ecole des Mines, a good practical mining and metallurgical education could be obtained, was strongly urged. Some notice was taken of the Museum of Practical Geology; and a hope was expressed that that establishment might become a school of the kind sought,—where, under Government direction, all that was desired in this way might be effected.—On Friday all the Sections again met, except the Ethnological; during the afternoon there were sailing matches and boat races; and after the ordinary, Mr. Vivian threw open his grounds,—but the wet weather interfered with the general enjoyment of the privilege. On Saturday there was no meeting in the Sections: and a very large party set off at eight in the morning to visit the iron works of Ystalyfera, and other points of interest in the Swansea Valley. At the former, which was the principal point of attraction, nearly two hundred members of the Association had the satisfaction of witnessing the casting of a large quantity of pig-iron, and of examining the appliances by which the economy of fuel, by the use of the gaseous products of the combustion (hereafter more particularly referred to in our report of Mr. Budd's paper read the previous day in the Chemical Section) is effected. Another party made an excursion to the bone caves and cliffs of Gower;—while a third, consisting of Lord Wrottesley, Sir Philip Egerton, Sir Henry De la Beche, Prof. Owen, Prof. Forbes, Dr. Carpenter, Mr. Bowerbank, Lieut. Spratt, and Mr. Jeffrey's, went with Mr. M'Andrew in his yacht the *Osprey*, on a dredging excursion in the Bristol Channel. Several marine animals, including the *Veella limbosa*, were thus procured alive for exhibition to the Zoological Section. Some of the Botanists, with Mr. Babington at their head, made an excursion round the coast from Oystermouth to Pennard Castle, where they obtained many of the rare plants of this part of Wales: amongst others, the *Diaba aizoides*, from the latter locality. The less energetic visited the zinc works of Mr. Vivian,—and spent the remainder of the day in Mr. Llewellyn's grounds of Penllergare. Here a boat impelled by the electrical current was at work on one of the lakes. In the evening, there